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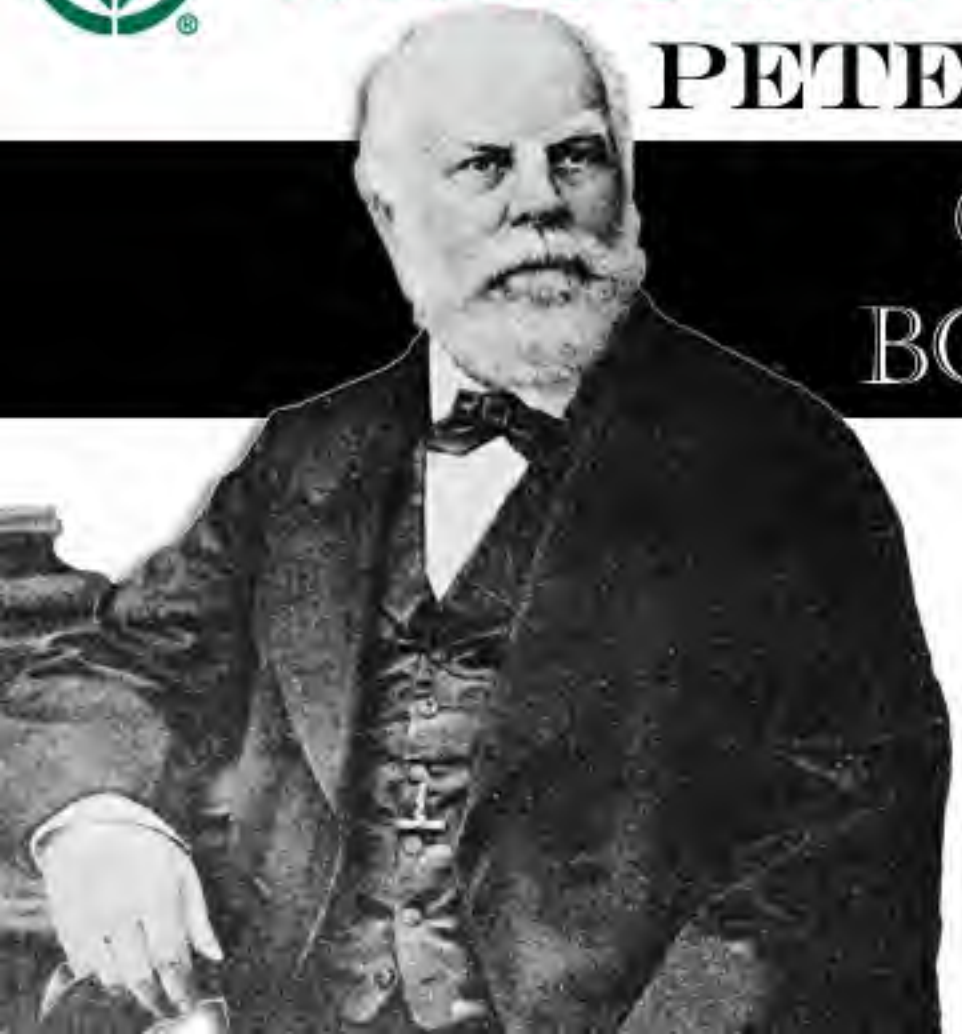

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Narrowly linear.
2–3. inches long,
1 or 1½ lin wide,
Scape slender; bracts
ovate obtuse, lowest
vertical ~~terminable~~
pedicels slender,
etc not different
from the usual form
of S. simplex
to which it no
doubt belongs.

Copy of original label

"Sagittaria graminea"
"Hab in Canada"

3 leaves are more phyllodic, evidently
the same as the leaves of S. acutifolia
(only narrower than these usually are)
The two other leaves of the specimen are
longer than the scape and have
regular, narrow, linear-lanear blades
on slender petioles. The blades are F
the above

typical specimen.

Sagittaria graminea Mich
ex Herb Michaux, Paris 1857

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100490

229 10

3330 : 174.50 = 10.80 x
10.80
3960
1745
333 | 1884.60 | 56.60
1665
2196
1998
1980

19 | 21830 | 1149
28
93
76
170
152
18

18 50
1207 55
1225 05

13765
95
123265
2605
660

95
10.80
95
100

19 | 10.80 | x = 5.95
95 | 56.84
130
114
160
152
8

18.50 rech

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Alismaceae, auct Michli

DC Monogr. Phan vol III.

Alisma Plantago Lin

A. Californicum Mich (Damasonium Torr)

Damasonium

Echinodorus (cuneulodes Eng)

E. Tenellus Buch. (parvulus Eng)

E. radicans Eng

E. rostratus Eng

Lophidocarpus calycinus Mich (Sagitt. Eng)

Sagittaria sagittifolia Lin

var Variabilis Eng.

" pubescens.

" longiscapa

" Conjunctus Alabama Drumd. 149.

S. graminea Mx & var platyphylla Eng.

S. cuneophylla Juss, Mex. Hooker Eng 2 46. Petrop.

S. heterophylla Pursh

S. Canadensis L. — var media = S. falcata Pursh

var papillosa (S. pap. Buch) Link 182

S. acutus Walt (var Cristata = pusilla)

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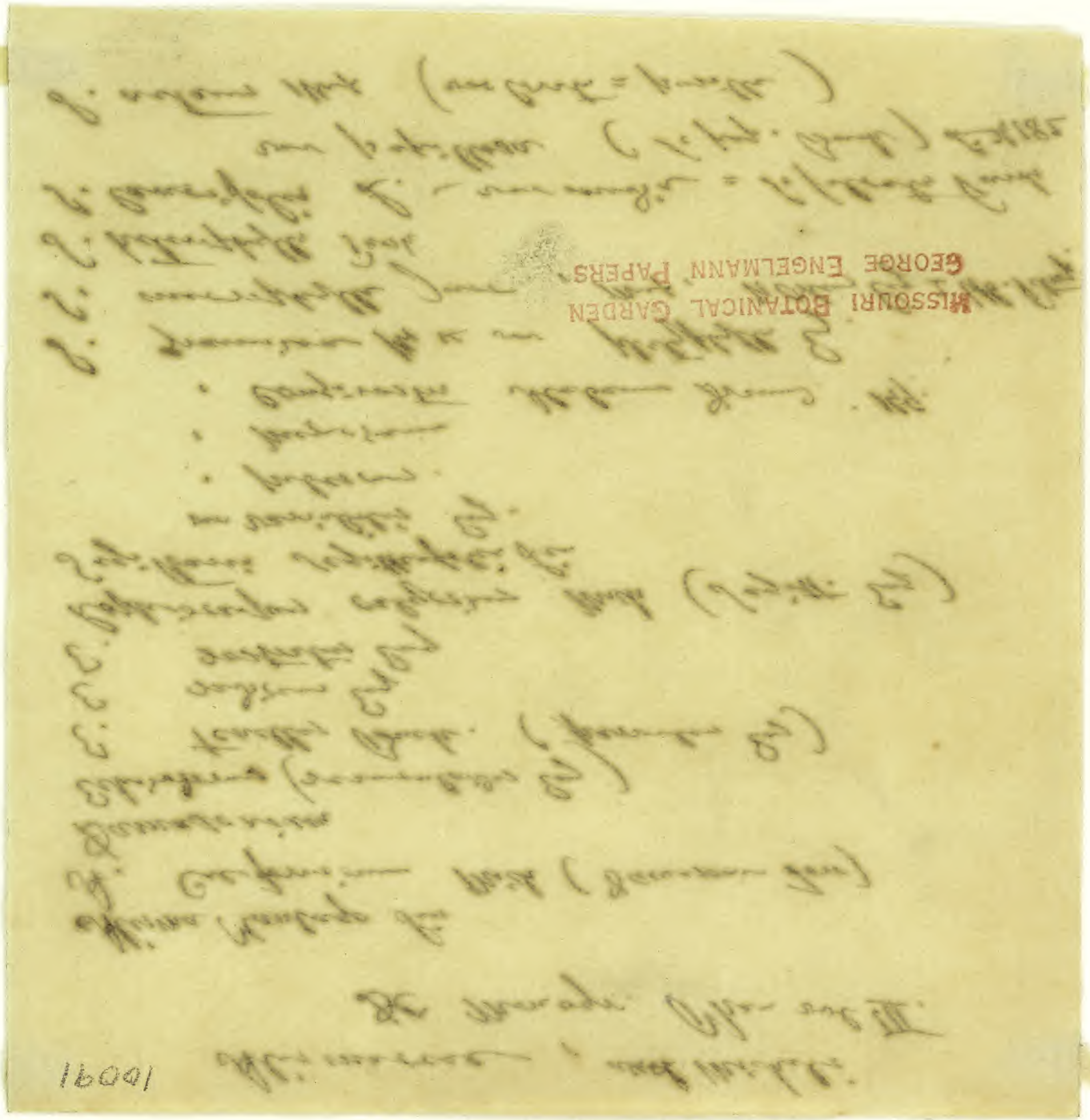
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Sagittaria Chapmanii

Bot. Mag. 1839.

1631

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S. graminea Elx

Illinois Aug 1847

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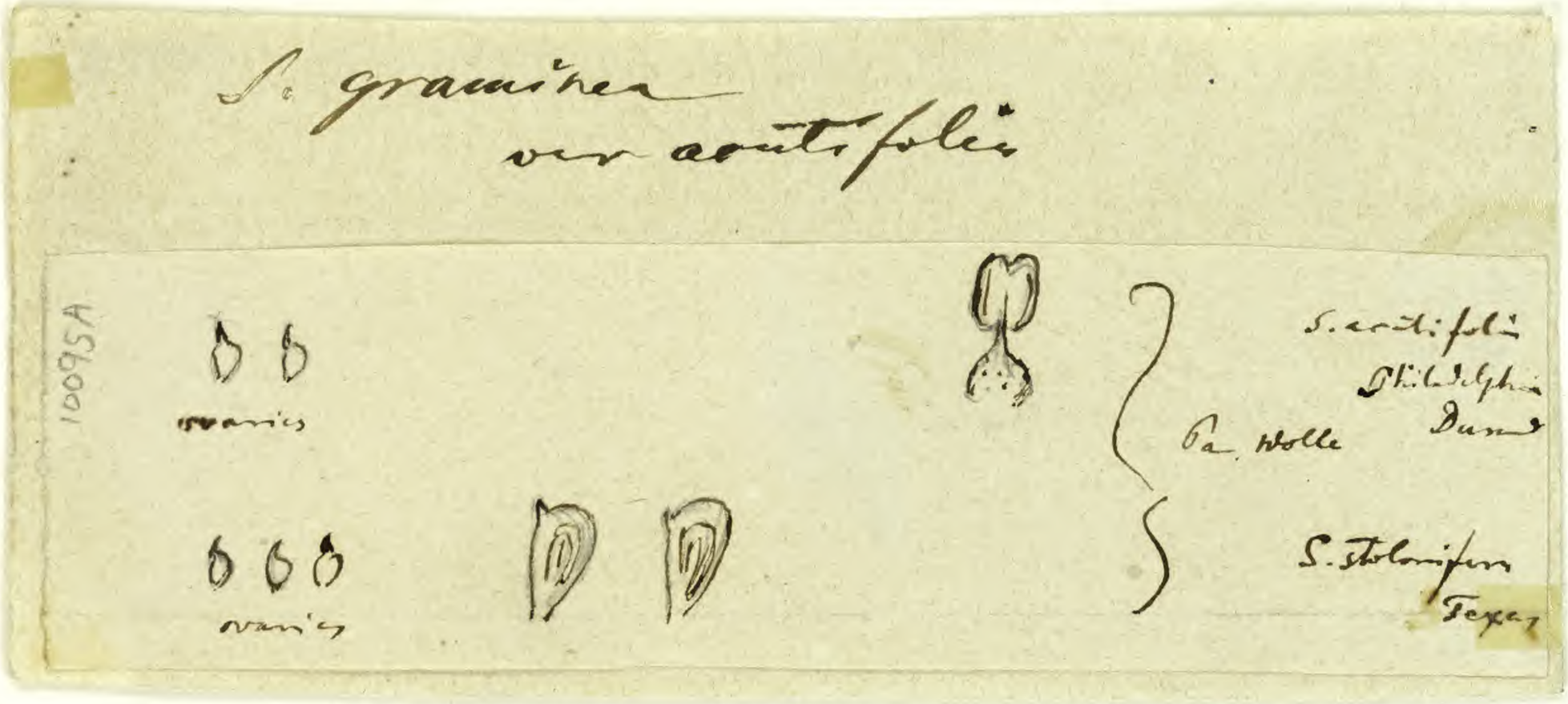

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for Legitimis Tabacy compare Kalm's
Travels 17... vol 2 p. 96.97
Darlington Flora Cestrica 1826 p. 102
"some of them the size of a goose egg."
Chapp New Plants of N.S. p. 195.

Darlington Flora Cestrica 1853 p. 305

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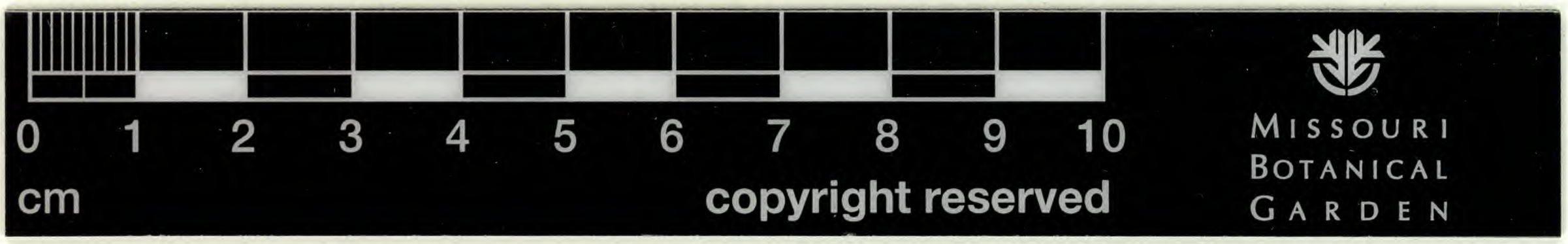

Sagitt pusilla Nutt. July 1860

fem. flowers single on stouter and shorter ~~stamens~~ an pedicelle, - 2 other flowers of course sterile male

once seen all 3 flowering male.

---

natans

sepala flor fem. lanceolata acuminata

— ft. mar- tenuiora, striata, obtusa

receptacul et capitul ~~capillar~~ globos ovatum s. ovato — oblongum

Cauly ~~ft~~ lanceolat acuminate, especially

fem ped. ~~ovl~~ not quite as long as male — sometimes

2 (or 3?), usually only 1, or ~~simple~~

sometimes branch, branch rarely of 3 flowers

10007

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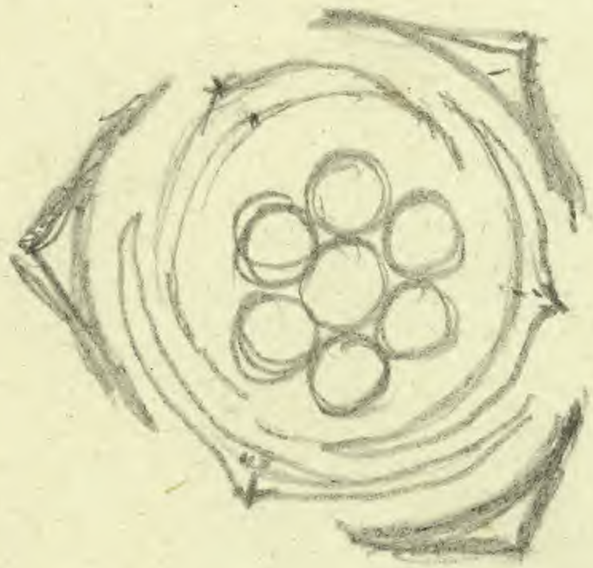

Sagittaria pusilla
Wilmington
Aug 1860

7 stamens, rarely 8
6 exterior alternating
with petals, and 3 sepals
1 (or 2) interior.

Fr. Carpels narrowly
cellular at back
papillose

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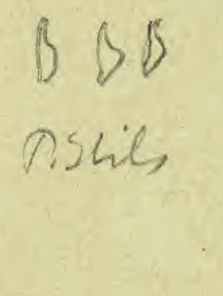
Spirilla

July 1860

pistills greatly magnif



before opening

filaments as long as orbicular abroad; anthers bulbous at base glabrous

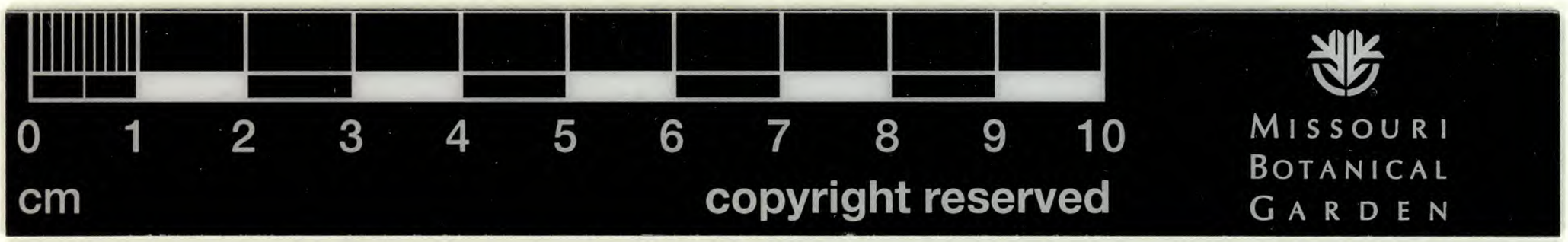
from Livingston

Del

fruit

back

fem calyx



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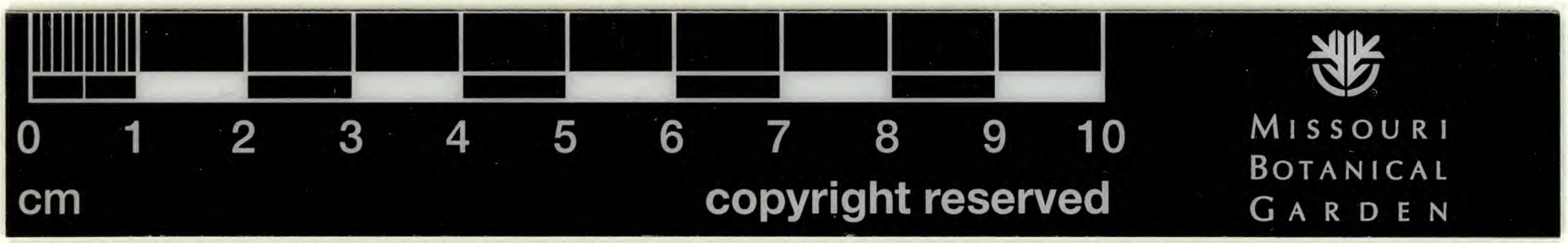
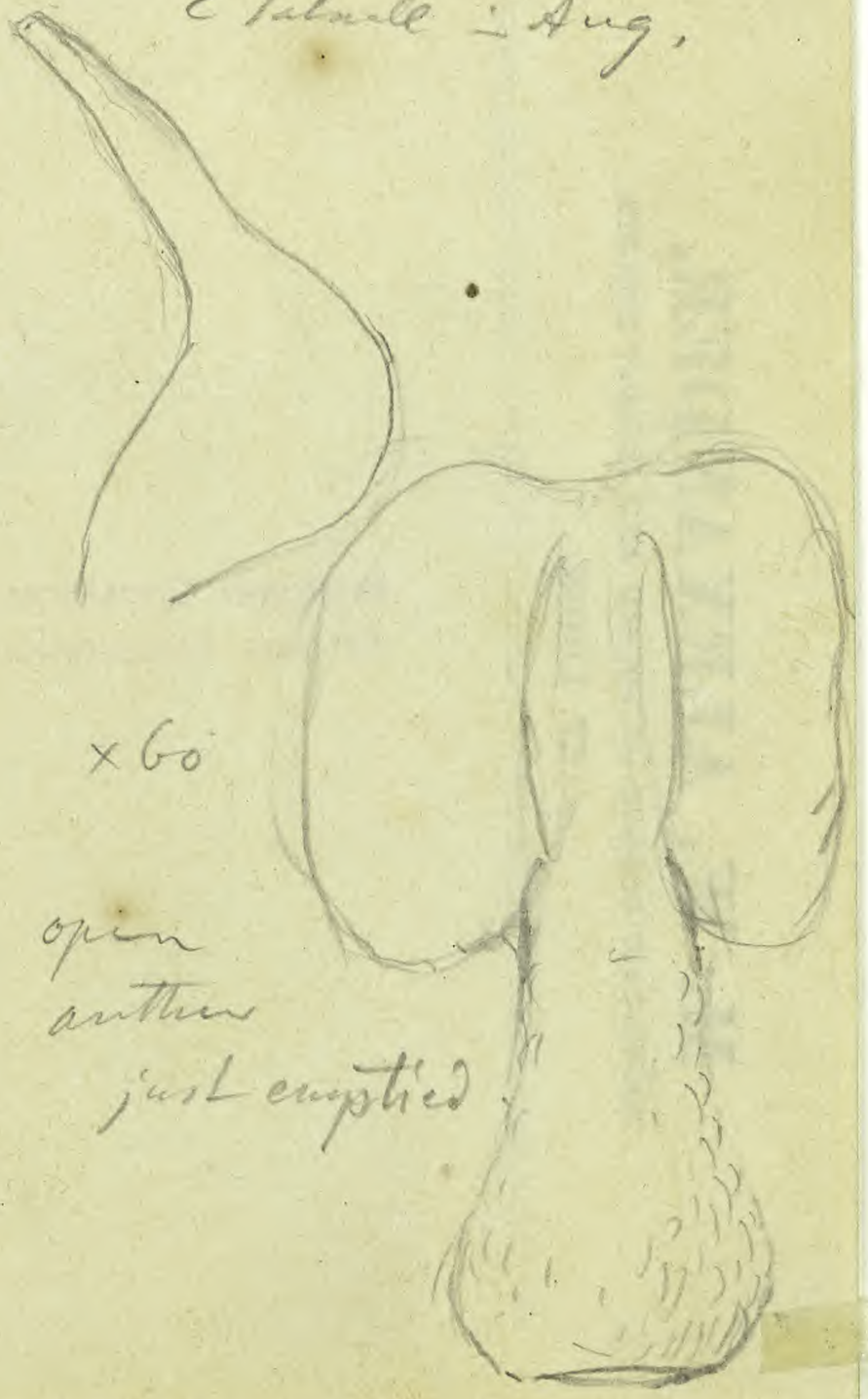


Sagitta pusilla

Alcohol specimen, collected Sept 1860

E Tabula ~ Aug.

pistils



open anthers just emptied

effete and probably dried

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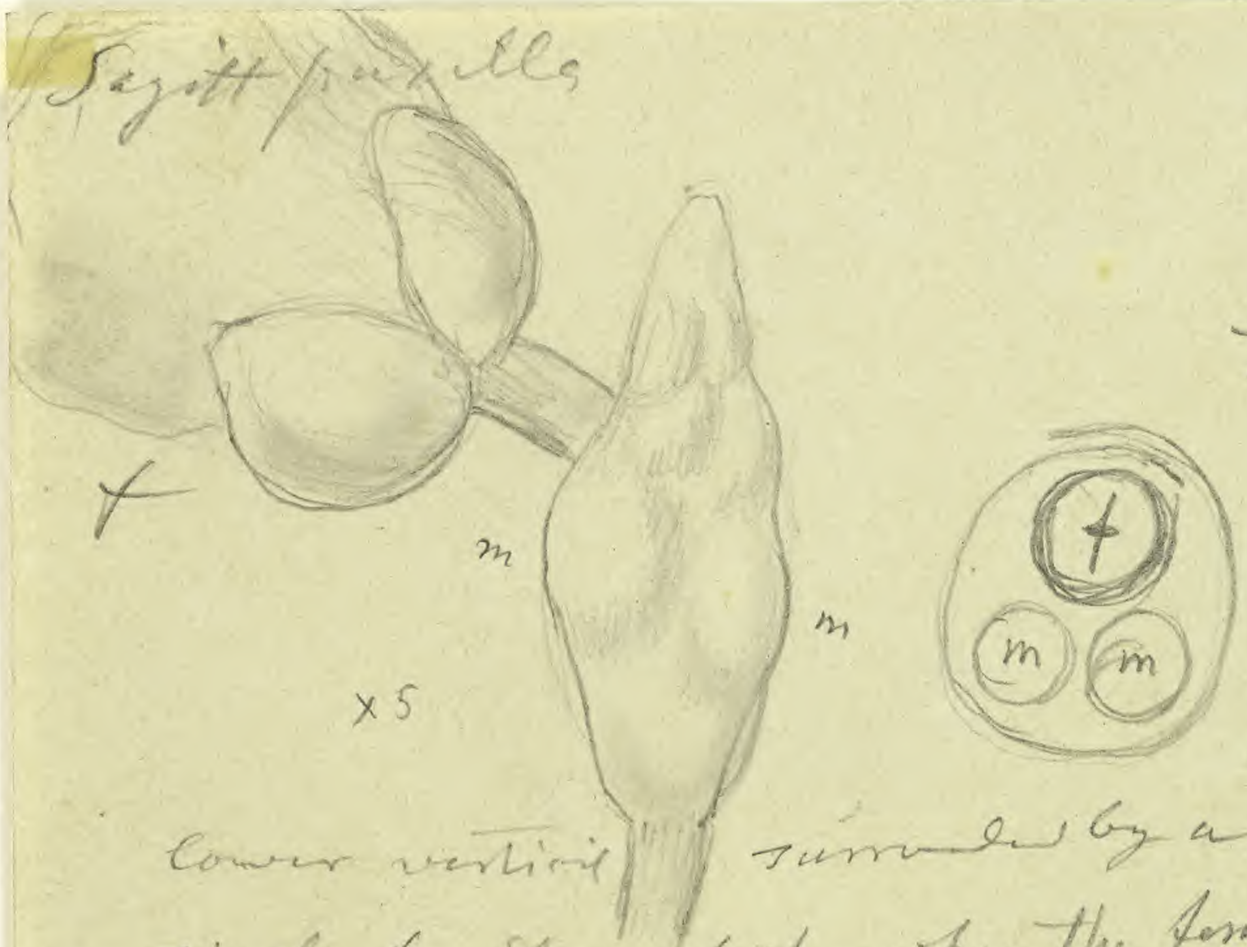
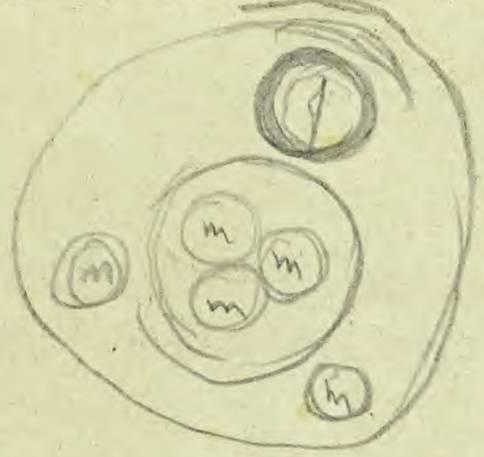
Sagittaria graminea

Sept 1866



Fem. pedicels much bigger than male

Fem fl.
male 3 l long and as wide when open (petals erecto-patulous)
petals ovate 2‴ wide and 2½‴ long



2 verticils of flowers

Lower verticil surrounded by a single bract, which, when the fem. flower is in bloom, envelopes the two ~~male~~ flower~~buds~~ of the same verticil, and the whole upper verticil, which again is enveloped in its proper bract — bract opposite the fem. flower — single or 3 connate?

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The *Elæacrinus Kirkwoodensis* is nearly allied to *E.* (*Pentremites*) *melo*, from which it is distinguished by its much smaller size and less deeply excavated base. It also occupies a higher geological position.

Occurs in the St. Louis Limestone (Carboniferous) on the Pacific railroad near Kirkwood, St. Louis county, Missouri.

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cumstances prevented the [illegible] more than a few crystals, which are now deposited in the collection of the Smithsonian Institute; a few others are also in the hands of members of the party. We were travelling at the time by forced night marches with nearly worn out animals, seeking to gain a spring of water in a distant range of mountains. This desert was then entirely unexplored. I have but little doubt that more interesting materials are to be found at the same point.

The mountains of the former Territory of Utah promise a rich yield to the mineralogist. We know already of gold and silver ores in the east, west and south part of that district; of copper and lead ores in the south, and I have discovered the latter also in the centre of it; of specular iron ores and native sulphur in the Rocky Mountains and near Little Salt Lake; of rock salt in the mountains south-east of Utah Lake; of native alum near Salt Lake; of various other salts in the deserts; and of silicates, composing the granites, porphyries, diorites, trachytes, and lavas, nearly over the whole area.

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Herb. Acad. Phila. 1856

Sag. natans Georgi Baldwi — larger than the usual form; Scapes 2–10 inches long, 1–2 fem. flowers. — Leaves ovate or obtuse or acute at base. — Fruit 3–5 carinate! — plants stolon-fera stolons often bulbose

Ht Acad Phila. Nov 1856

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July 1860

S. gratans

ex Hb Andr Pk

soon after flowers

♀ DD pistils

pistils soon after flowers

much magnified

0.07

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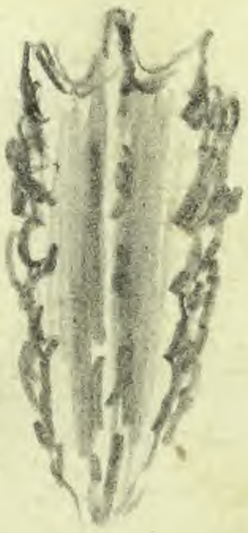
S. natans var Cornuta

St Leavenworth, St Marks

(Prof Torrey's Herbar) July 1860



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S. natans !
ex Hb Torrey
1860

unripe fruit

0.7 lin

111
0.3
—0.4

pistils much magn't

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Herb Torrey Nov 4th 1856

Sagittaria natans Michx 1 rep debilis

pedicellis elongatis petiolibus ~~triquetris~~ 1–3
puctiferis
~~dorsum~~ reversis; calycibus puctiferis patulis
s. reversis
pollamentis e basi bulbosa subulatis glabris
antheram oblongo – linearem aequantibus
stylis brevibus erectis ovatis multo
brevioribus.

~~capitellis~~ obovatis brevissime rostellatis
rasinatis 3–5 rostratis.

α. vera; foliis omnibus natantibus
ovatis s. (cuneolato ovatis) basi obtusis
cordatisve, raris petiolo attenuatis
rapis aequilongis, pedicellis puctiferis
singulis plerque; ovatis capitellis subglaucis

β. ~~pusilla~~ fluviatilis foliis plerisque
submersis (linearibus late) elongatis;
~~pedicellis~~ rarius nullis angulo oblongo
linearibus natantibus; scapo elongato
~~floribus~~ ovatis, superiore petiolis; ovatis
capitellis dentatis ~~pollicaribus~~ erectis;

γ. pusilla foliis submersis lineari
rapis brevi plerque longioribus;
flore singulo petiolis; ovatis capitellis
subglaucis

Natans & Scant & Flor Ja, leaves 1/2–2 inch
by 9 lines wide — in S. Florida — deep water
also in the Harbor of St Marks — water 2–6 feet deep

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Leaves or rather phylloclades 10 – 20 inches long
1/4 – 3/4 inch wide — floating leaves similar
to Natans. or narrower
& - parts as elsewhere

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Sagittaria falcata var. linearis — Pine Key Florida.
leaves 2 inches long 1 – 1½ lin wide
scape 1½ – 2 inches high.

S. simplex var maxima
S. acutifolia Hale leaves 5 – 6 inches long
3 branched broadly oval abruptly acuminate
pedicelled short, thick, heads larger than
usual
stoloniferous

filaments
glandular!
fruit beaked — plentiful bulbs at base
plant of Fendler's. — perhaps distinct from simplex
Same as S. Chapmanii N. Bourgeau 713

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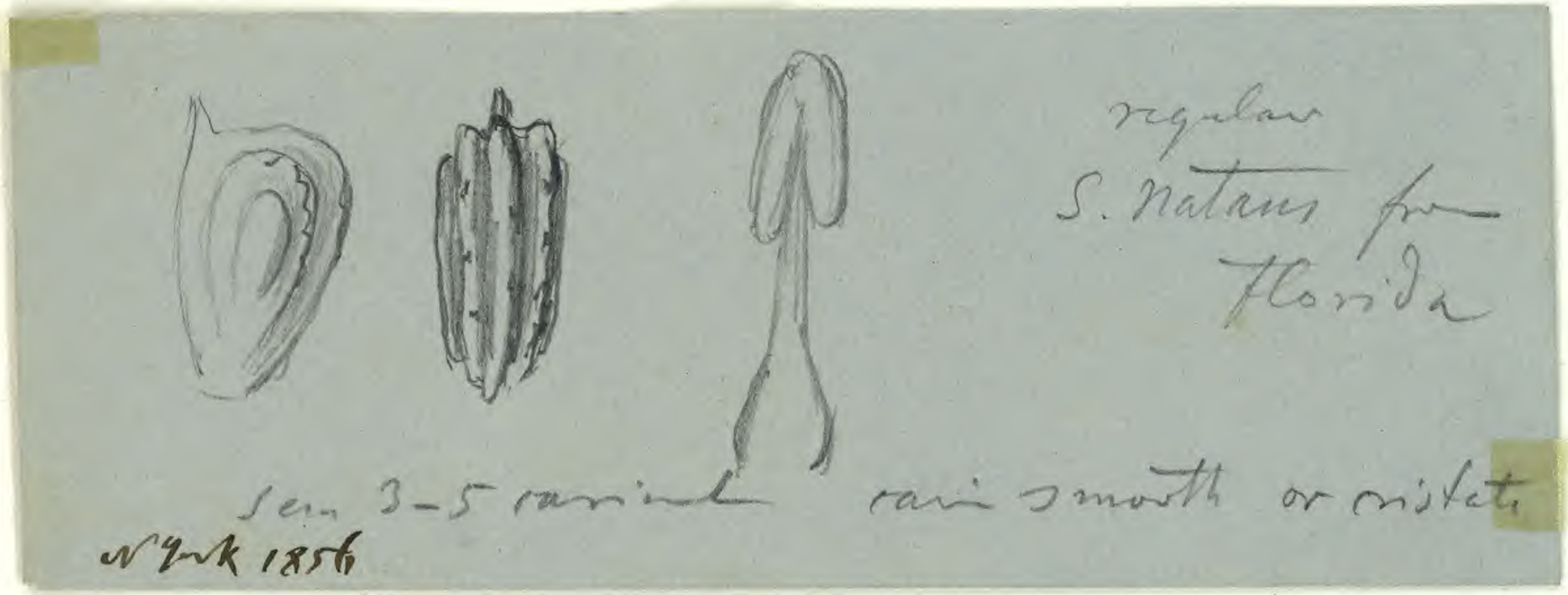

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